

rectly stimulate production of a helper T-cell type 1 response that has been shown to be involved in effectively clearing *Leishmania* in the skin lesions. Conclusion: Fluconazole 400 mg/day during 6 weeks appears to be a safe and effective treatment of leishmaniasis caused by *L. major* for patients who cannot be managed by local treatment only. Association with other treatments like 5% imiquimod cream or cryotherapy may accelerate healing of the lesions.

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Chloracne/MADISH-like cystic lesions after low-dose exposure to dioxin. A histological study of 43 cases

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A pollutant waste incinerator was exploited in Melun area in south of Paris for 28 years. Dioxin analysis of the fumes released by the incinerator, the soil, the eggs and the blood of several inhabitants indicated that this population had been exposed to dioxin-like compounds over a long period of time.

Here we describe the morphological analysis of 43 cases (23 m, 20 f) from this population. Hematoxylin-Eosin-stained sections from retroauricular and lesional skin biopsies were analysed.

On histological examination, diagnosis of normal skin was made for 6 of these patients. 22 patients showed histologically perifolliculitis, with a nonspecific dermal inflammatory infiltrate in two patients, follicular eczema in one patient and eosinophilic infiltrate in one patient. Inflammatory infiltrate was composed of lymphocytes, sometimes in addition with some neutrophils or eosinophils. Follicular wall was not destructed in any of these cases. On histological examination, 4 of the 43 patients showed cystic lesions compatible with chloracne/MADISH, three of them were also detected clinically.

The impact on health on long-term exposure to subtoxic doses of dioxin-like compounds is unknown. Here we show in a population exposed for a long time to low amounts of dioxin from the environment some cutaneous morphological changes compatible with those observed in acute dioxin intoxication. By completing this analysis with immunohistochemical labelling such as CYP1A1, it would be possible to use the morphological analysis of skin biopsies as a biomarker of chronic exposure to low dose of dioxin-like pollutants

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Cutaneous PEComa: A case report

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Background: We describe the case of a 25 year-old

male patient who presented with a papule situated on his forearm. The lesion was red-brown colored and hard on palpation. The clinical differential diagnosis was cystic lesion versus a benign adnexal tumor.

Methods: Histological slides of paraffin-embedded biopsy material from the patient mentioned above have been analyzed on Hematoxylin-Eosin-stained sections and on immunohistochemical stains for Melan-A, HMB-45, Factor XIII, desmin, CD68, CD31, CD34, alpha-actin and S-100.

Results: Histological examination showed a slightly hyperplastic epidermis overlying a well-demarcated dermal proliferation of non-atypical small, sometimes spindle-shaped or epithelioid cells, sometimes regrouped around small vessels. Immunohistochemistry showed that these cells were positive for Melan-A, HMB-45 and Factor XIII, and negative for desmin, CD68 and S-100. CD31, CD34 and alpha-actin marked vessel walls, without any reaction in the tumor cells.

Conclusion: This histopathological and immunohistochemical phenotype is suggestive for a perivascular epithelioid cell tumor (PEComa). PEComa is a rare mesenchymal tumor recently described, composed of cells which express normally melanocyte and smooth muscle markers. It seems to have a benign behavior, but follow-up data are limited. PEComa mainly affects the abdominopelvic region. Angiomyolipoma of the kidney and liver, sugar tumor of the lung, lymphangiomatosis and lymphangiomatoma are part of the large spectrum of PEComas. In the skin, PEComas are extremely rare and often misdiagnosed.

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Acne conglobata-like lesions as sole manifestation of chronic granulomatous disease

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A 38-year-old female patient presented with recalcitrant acne. The lesions, which had first appeared in adolescence, appear in the face and on the trunk. The patient describes numerous inflammatory partly crusted nodules, which sometimes heal with relevant scarring. They did not respond to topical anti-inflammatory treatments and also two courses of systemic retinoids with cumulative doses of 150 mg / kg failed. Interestingly, the patient reports complete remission of the skin lesions during her two pregnancies. There were no concomitant other diseases, no drug-intake and family history for skin diseases, mainly acne was negative.

Clinical examination revealed sharply demarcated, tender inflammatory nodules of up to 4-5 mm diameter on the trunk, focal scarring in the face, but no comedones. From a skin swab taken from beneath

a crust was grown staphylococcus aureus. The nitro-blue tetrazolium test (NBT) performed because her son was suffering from recurrent infections showed reduced phagocyte NADPH oxidase activity. Genetic tests finally confirmed X-linked chronic granulomatous disease (CGD).

CGD is a genetically heterogeneous condition characterized by recurrent life-threatening bacterial and fungal infections and granuloma formation. CGD is caused by defects in the phagocyte NADPH oxidase, which result in the inability of phagocytes (neutrophils, monocytes, and macrophages) to destroy catalase-positive microorganisms. The patients usually suffer from recurrent infections caused by bacterial and fungal pathogens in the skin, lung, lymph nodes and liver, and they are prone to the formation of granulomata in various organs, growth retardation and autoimmune disorders. In our patient, recurrent skin infections, which were misdiagnosed as recalcitrant acne, were the only symptom. This illustrates on one hand the great variability of severity of CGD and on the other hand that inflammatory granulomas in CGD can be misinterpreted as acne.

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Management of prurigo nodularis with the immunosuppressive agent methotrexate: a retrospective observational study

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Background: Prurigo nodularis (PN) is a chronic, debilitating, inflammatory skin disease. Adherence to therapy can be impaired and represents a challenge for the physician. Methotrexate (MTX) is a safe folic antagonist widely used in the management of inflammatory skin diseases such as psoriasis. Weekly administration of low-dose methotrexate (L-MTX) represents an attractive treatment option and could therefore find its place in the management of PN. **Objective:** The aim of this retrospective observational study is to evaluate the efficacy of L-MTX as a treatment option for PN.

Methods: We enrolled 14 patients who had failed to respond to conventional therapies such as topical steroids, phototherapy and anti-pruritic agents. Subjective symptoms (pruritus score) and objective symptoms (Prurigo Nodularis Area and Severity Index score (PN-ASI)) were recorded. Treatment consisted in the subcutaneous administration of 7.5 mg to 15 mg/week of MTX for a minimum of 6 months. The adjuvant application of emollients and topical steroids was maintained where needed.

Results: Significant improvement (decrease of pruritus score, PN-ASI > 75%) was observed in 11 cases; trend to improvement in 1 case; no response was observed in 1 case; and a relapse was observed in 1 case after discontinuation of the treatment.

Conclusions: At doses of 7.5 mg to 15 mg/week, MTX is a safe treatment and allows improvement or healing in some patients, with long lasting remission.

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A new alternative method for testing skin irritation using a fresh human skin model

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Background: Studies evaluating skin irritation have traditionally used laboratory animals; however, such methods are questionable regarding their relevance for humans. New in vitro methods have recently been developed, such as the reconstructed human epidermis (RHE) model. Although the RHE method has been validated, the agreement with in vivo results such as the 4-hour human patch test (HPT) is 76% at best (Epiderm®). There is a need to develop an in vitro method that better simulates the anatomical and pathological reality encountered in vivo.

Objectives: Our objective was to develop an in vitro method to determine skin irritation from chemical exposure using human viable skin, and compare our results with already published results.

Methodology: Human skin removed during plastic surgery was directly mounted on an in vitro diffusion cell system, and the test chemicals (Heptylbutyrate, Hexyl-salicylate, Butyl-Methacrylate, I-Bromohexane) were applied on the stratum corneum. The skin was exposed for 4 hours. Histopathological examinations were used to investigate potential skin irritation signs such as spongiosis, necrosis and basal vacuolisation.

Results: We obtained 100% agreement with the in vivo 4-hour HPT model the classification of irritancy for the 5 substances tested; 80% agreement with the two RHE models (Episkin® and Epiderm®); and 60% agreement with the animal model. The coefficients of variation (CV) between the three different test batches were < 0.1, showing good reproducibility in the same laboratory.

Conclusions: This new in vitro test method using fresh human skin presented effective results for the four tested chemicals. Further investigations would be to conduct the same method for a greater number of substances; it should also be tested in a number of different laboratories in order to suitably evaluate its reproducibility.

Key words: skin irritation; fresh human skin model; 4-hour human patch test; rabbit test; reconstructed human epidermis model.

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Sun protective behavior of tourists travelling to holiday destinations in the tropics and subtropics

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